

Applicants: de Groot, et al.
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REMARKS

Prior to the present amendment, claims 39, 41-44 and 46-48 were pending. By this amendment, claims 39, 44, 47 and 48 have been amended, and new claim 49 has been added. Accordingly, claims 39, 41-44 and 46-49 are currently pending.

Rejection under 35 U.S.C. §112, first paragraph

On page 2 of the office action, claims 39, 41-44 and 46-48 were rejected under 35 U.S.C. §112, first paragraph allegedly for lack of adequate written description. According to the examiner, the limitation “which has an Expect value as determined by Blast or Blastp computer programs of less than $2e^{-27}$ when compared to SEQ. ID. NO: 2” recited in the claims constitutes new matter.

Applicants respectfully disagree. Nevertheless, merely in order to expedite prosecution, applicants have deleted the phrase “which has an Expect value as determined by Blast or Blastp computer programs of less than $2e^{-27}$ when compared to SEQ. ID. NO: 2.” The new phrase, “with a homology to SEQ. ID. NO: 2 that is greater than the homology between SEQ. ID. NO: 2 and the sequences set forth in SEQ. ID. NOs: 3, 4, and 5,” has been added.

Support for this new limitation is found in the specification as filed for the following reasons. First, the SEQ. ID. NOs: 3, 4, and 5 are described on page 5, lines 8-14 and they are shown in figures 2, 3, and 4, respectively. The specification describes the bacteria from which the sequences are obtained, and it describes the Swiss-Prot accession numbers that were accorded to these sequences.

Second, evidence that the inventors contemplated patentable homologues to their claimed protease maturation protein of SEQ. ID. NO: 2 is found in the specification, for example, on page 6, line 31 through page 7, line 14 (describing homologues and functional homologue proteins of Pmp that can be used in the claimed invention) ; on page 7, lines 22-23 (describing how Pmp or the fragment or the functional equivalent thereof can be

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obtained); page 7, lines 25-27 (describing the use of Pmp or a homologous functional equivalent thereof as a carrier); and page 7, lines 31-33 (describing the use of Pmp or homologous functional equivalent thereof as a carrier protein, preferably in a conjugate vaccine strategy).

The applicants' contemplation of homologues is further supported by the fact that they claimed homologues in their originally filed claims. See, for example, original claims 1, 19, and 20.

Therefore, a person having ordinary skill in the art would readily understand that the inventors:

- a) appreciated that SEQ. ID. NOs: 3, 4, and 5 are known in the art;
- b) wanted to claim homologues of SEQ. ID. NO: 2;
- c) appreciated that the prior art sequences of SEQ. ID. NOs: 3, 4, and 5 had to be excluded from the claimed genus of homologous proteins; and, therefore,
- d) appreciated that the claimed homologues had to have a greater homology to SEQ. ID. NO: 2 than the prior art sequences of SEQ. ID. NOs: 3, 4, and 5 in order to be patentable.

In view of the above amendments to the claims, the rejection of the claims under 35 U.S.C. §112, first paragraph is now moot, and should be withdrawn.

Rejection under 35 U.S.C. §112, second paragraph

On page 3 of the office action, claims 39, 41-44, and 46-48 were rejected under 35 U.S.C. §112, second paragraph for allegedly being indefinite. The examiner alleges that the claim limitation "which has an Expect value as determined by Blast or Blastp computer programs of less than $2e^{-27}$ when compared to SEQ. ID. NO: 2" is indefinite. Applicants have now deleted this limitation. In view of the above amendments to the claims, the

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rejection of the claims under 35 U.S.C. §112, second paragraph is now moot, and should be withdrawn.

New Claim 49

New claim 49 comprises the claim element of an isolated protease maturation protein of *S. pneumoniae*. New claim 49 differs from claim 39 in that new claim 49 includes the limitation of “SEQ. ID. NO: 2 starting at the methionine codon at position 10.” Support for this limitation can be found in the specification as originally filed, see *inter alia*, figure 1 and page 11, lines 26-27.

For the reasons given above, allowance of the pending claims is earnestly requested. If the examiner has any questions regarding this amendment, she is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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